Application No. 10/623,178 Docket No.: 09496/000M861-US0

Preliminary Amendment dated January 25, 2008 In Response to final Office Action of May 24, 2007

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A hematocrit sensor comprising:

a blood circuit having two ends;

a blood purifier connected to said blood circuit between said two ends and configured to purify blood that is being circulated extracorporeally in said blood circuit; and

a sensor connected to said blood circuit and configured to measure hematocrit values, the sensor including

a housing connected to a portion of said blood circuit,

a slot provided with said housing,

a slit included in said slot of said housing, and

a light emission device and a single light reception device provided <u>adjacent to each</u>
<u>other in said slot</u> with said housing such that both said light emission device and said single
light reception device are in optical connection with each other and positioned to face said
blood circuit through said slit.

- (Previously Presented) The hematocrit sensor of claim 1, further comprising a cover provided at said housing, which covers said slot when said cover is closed.
- 3. (Previously Presented) The hematocrit sensor of claim 1, further comprising a cover provided at said housing, which swings open against said housing and uncovers said slot when said cover is opened.
- **4.** (**Previously Presented**) The hematocrit sensor of claim 2, further comprising a holding device configured to hold the cover in place when the slot is covered.

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5. (Previously Presented) The hematocrit sensor of claim 2, further comprising a detection

device configured to detect at least one of whether said blood circuit is in said slot, and whether said

cover is closed.

6. (Previously Presented) The hematocrit sensor of claim 1, wherein said blood purifier

configured to perform dialysis treatment.

7. (Previously Presented) The hematocrit sensor of claim 6, further comprising an

ultrafiltration pump, a substitution fluid, and a dialyzing fluid.

8. (Original) The hematocrit sensor of claim 1, further comprising a drip chamber

connected to said blood circuit.

9. (Previously Presented) The hematocrit sensor of claim 8, wherein said hematocrit

sensor is provided with a fixing device at said housing of said sensor to fix said drip chamber.

10. (Previously Presented) The hematocrit sensor of claim 1, further comprising an air

bubble detector provided with said housing of said sensor and connected to said blood circuit.

11. (Previously Presented) The hematocrit sensor of claim 1, further comprising a blood

detector connected to said blood circuit and configured to detect a presence of blood in said blood

circuit.

12. (Original) The hematocrit sensor of claim 1, wherein said slit has an adjustable width.

13. (Previously Presented) The hematocrit sensor of claim 1, wherein at least one of said

plurality of pores has an adjustable diameter.

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### 14. (Currently Amended) A method of measuring hematocrit values, comprising:

providing a sensor connected to a blood circuit, said sensor having a slot with [[either]] a slit included in said slot, [[and]]

providing a light emission device and a single light reception device adjacent to each other in said slot such that both said light emission device and said single light reception device are in optical connection with each other and positioned to face said blood circuit through said slit;

said-sensor including a light-emission device and a single light-reception device, both of which are in optical connection with each-other and positioned to face said-blood-circuit through said-slit:

emitting light from said light emission device toward blood flowing through said blood circuit;

receiving said light at said single light reception device, said <u>received</u> light being emitted from said light emission device and [[being]] reflected from said blood flowing through said blood circuit:

determining a light absorption received by said single light reception device; and calculating hematocrit values based on a strength of said light absorption determined by said determining.

#### 15. (Previously Presented) The method of claim 14, wherein:

said light emission device emits light intermittently; and

said hematocrit values calculated in said calculating are corrected based on a strength of an ambient light received by said single light reception device when said light emission device does not emit said light.

16. (Previously Presented) The method of claim 14, wherein said hematocrit values calculated in said calculating are corrected to compensate an error based on a flow rate of said blood flowing through said blood circuit.

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17. (Previously Presented) The method of claim 15, wherein said hematocrit values calculated in said calculating are corrected to compensate an error based on a flow rate of said blood flowing through said blood circuit.

# 18. (Previously Presented) The method of claim 14, further comprising:

detecting a presence of said blood flowing through said blood circuit, wherein the calculating starts calculating a first of said hematocrit values at a time said detecting first detects said presence of said blood.

## 19. (Currently Amended) A hematocrit sensor comprising:

a blood circuit having two ends;

a blood purifier connected to the blood circuit between the two ends and configured to purify blood that is being circulated extracorporeally in the blood circuit; and

a sensor connected to the blood circuit and configured to measure hematocrit values, the sensor including

- a housing connected to a portion of the blood circuit,
- a slot provided with the housing.
- a slit in the slot of the housing, and
- a single light emission device and a single light reception device both provided adjacent to each other in said slot with the housing and configured to be in optical connection with each other and positioned to face the blood circuit through the slit.